

## CLAIMS

Please amend the claims as follows:

1        1. (Currently Amended) A flow system device used for creating, monitoring, and  
2 controlling specific modifiable fluid flow patterns, said system comprising:  
3        at least one fluid filled loop;  
4        a rotor stage for maintaining at least one rotor, said loop positioned on said rotor;  
5        a driving motor for rotating said rotor stage; [and]  
6        a motion controller for controlling the speed and directional motion of said motor[-];  
7        an external measurement system to observe, record, and control the contained loop  
8 flow within said at least one loop.

1        2. Cancelled

1        3. The flow system device of claim 1 wherein a vascular prosthesis is placed within the  
2 tube.

1        4. The flow system device of claim 3, wherein said vascular prosthesis is a stent or  
2 graft.

1        5. The flow system device of claim 1 wherein the created fluid flow is bidirectional.

1        6. The flow system device of claim 1 wherein the loop includes a one way valve.

1        7. The flow system device of claim 1 wherein the system included six rotors with six  
2 corresponding fluid filled loops.

1 8. The flow system device of claim 1 wherein the fluid is blood.

1 9. (Currently Amended) The flow system device of claim [±] 3 wherein the stents are  
2 coated with gold or stainless steel.

1 10. (Currently Amended) The flow system of claim 1 wherein ~~[the fluid flow within~~  
2 ~~the loop is controllable such that thrombotic]~~ a biological signal is created.

1 11. The flow system device of claim 1 wherein the fluid flow within the loop is  
2 controllable such that the effects of background noise is minimized.

1 12. (Currently Amended) A method of creating, monitoring, and controlling specific,  
2 modifiable fluid flow patterns, said method comprises:  
3 providing a fluid flow system including at least one loop, a rotor stage for maintaining at least  
4 one rotor, the loop position on the rotor, a driving motor for rotating the rotor stage ~~[and]~~, a  
5 motion controller for controlling the speed and directional motion of the ~~[motor]~~ rotor[±], and  
6 an external measurement system to observe, record, and control the contained loop flow;

7 filling the at least one loop with fluid which is to be tested;

8 controlling the motor to obtain the desired motion of the fluid within the tube;

9 measuring the desired effects of the fluid flow.

1 13. Cancelled

1 14. The method of claim 12 wherein the fluid is blood.

1 15. The method of claim 12 wherein a vascular prosthesis is maintained within the

2 tube.

1 16. The method of claim 15 wherein the vascular prosthesis is a stent or graft.

1 17. (Currently Amended) The method of claim 15 wherein the [~~thrombotic~~] biologic  
2 effect of the vascular prosthesis on the blood is measured.

1 18. Cancelled

1 19. Cancelled

1 20. Cancelled

1 21. Cancelled

1 22. (New) The flow system device of claim 1 wherein the loop has the geometric  
2 characteristics of a coronary arterial segment.

1 23. (New) The flow system device of claim 5 wherein the specific fluid flow pattern  
2 produced and observed is that of coronary flow.

1 24. (New) The flow system device of claim 10 wherein the biological signal is a  
2 thrombotic signal.

1 25. (New) The flow system device of claim 10 wherein the fluid flow within the loop  
2 is controllable, such that flow dependent variations in the biological signal are generated.

1 26. (New) The method of claim 12 wherein the fluid flow within the loop is  
2 controlled, such that flow-dependent variations in the desired, measured effects are generated.

1           27. (New) The method of claim 17 wherein the loop has the geometric characteristics  
2 of a coronary arterial segment.

1           28. (New) The method of claim 17 wherein the specific fluid flow pattern produced  
2 and observed is that of coronary flow.

1           29. (New) The method of claim 17 wherein the biological effect is a thrombotic  
2 effect.